Solvent, Tetrachloroethylene

PERCHLOROETHYLENE PAGE:

DOM 13

FEB 11 1980

JAN 17 1982

MATERIAL SAFETY DATA SHEET

ACCEPTED BY O.S.H.A. AS ESSENTIALLY SIMILIAR TO O.S.H.A. FORM 20

ASHLAND OIL INC., ESTIG, P.O.BOX 2458, COLUMBUS,OHIO 43216

24-HOUR EMERGENCY TELEPHONE: 606-324-1133 (LOCATED AT ASHLAND, KENTUCKY)

****

SHLAND PRODUCT NAME: PERCHLOROETHYLENE

(ASHLAN2)

DATA SHEET NO: 0001042-001

LATEST REVISION DATE: 03/28-78067

********** SECTION I-PRODUCT IDENTIFICATION **********

ENERAL OR GENERIC ID: CHLORINATED HYDROCARBON

AZARD CLASSIFICATION: (99) NOT APPLICABLE

********** SECTION II-HAZARDOUS COMPONENTS **********

INGREDIENT	PERCENT	TLV	
ERCHLOROETHYLENE	100.00%	100 PPM	(1

1): NIOSH RECOMMENDS A TLV OF 50 PPM.

********** SECTION III-PHYSICAL DATA **********

PROPERTY	REFINEMENT	MEASUREMENT	
NITIAL BOILING POINT	FOR PRODUCT	250.00	DEG F
		(121.11	DEG C
		@ 760.00	MMHG
APOR PRESSURE	FOR PRODUCT	14.00	MMHG
		@ 68.00	DEG F
		(20.00	DEG C
APOR DENSITY	AIR = 1	5.8	
PECIFIC GRAVITY		1.620	
		@ 77.00	DEG F
		(25.00	DEG C
ERCENT VOLATILES		100.00	%
VAPORATION RATE	(N BU AC = 1)	2.80	

********** SECTION IV-FIRE AND EXPLOSION DATA **********

LASH POINT(CLOSED CUP) NOT APPLICABLE

OWER EXPLOSIVE LIMIT NOT APPLICABLE

XTINGUISHING MEDIA: WATER FOG

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********** SECTION IV-FIRE AND EXPLOSION DATA (CONTINUED) **********

AZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, HYDROGEN CHLORIDE, PHOSGENE, VARIOUS HYDROCARBONS, ETC.

PECIAL FIREFIGHTING PROCEDURES: WATER MAY BE USED TO KEEP FIRE-EXPOSED CONTAINERS COOL UNTIL FIRE IS OUT.
SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.

NUSUAL FIRE & EXPLOSION HAZARDS: NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

********** SECTION V-HEALTH HAZARD DATA **********

HRESHOLD LIMIT VALUE: 100 PPM

FFECTS OF OVEREXPOSURE: FOR PRODUCT

YES - CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION.
KIN - PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFATTING, DERMATITIS.
REATHING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, POSSIBLE UNCONSCIOUSNESS, AND EVEN ASPHYXIATION.
WALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, DIARRHEA.

IRST AID:

F ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.

F IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY, GET MEDICAL ATTENTION.

F SWALLOWED: GIVE TWO GLASSES OF WATER; INDUCE VOMITING IMMEDIATELY BY STICKING FINGER DOWN THROAT. CALL A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

F BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.

********** SECTION VI-REACTIVITY DATA **********

AZARDOUS POLYMERIZATION: CANNOT OCCUR
TABILITY: STABLE

NCOMPATABILITY: AVOID CONTACT WITH:, STRONG ALKALIES (E.G. NAOH, NH4OH, ETC.)

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********** SECTION VII-SPILL OR LEAK PROCEDURES **********

TEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

MALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO HOOD.

ARGE SPILL: PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS.

ASTE DISPOSAL METHOD:

MALL SPILL: ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD. ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DESTROY REMAINING MATERIAL BY BURNING IN AN IRON PAN.

ARGE SPILL: DESTROY BY LIQUID INCINERATION WITH OFF-GAS SCRUBBER. MATERIAL COLLECTED ON ABSORBENT MATERIAL MAY BE DEPOSITED IN A POSTED TOXIC SUBSTANCE LANDFILL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

********** SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED **********

ESPIRATORY PROTECTION: IF TLV OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MESA JOINTLY APPROVED SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACE PIECE OPERATED IN PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE IS ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MESA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER).

ENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL) AND/OR LOCAL EXHAUST VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

ROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, POLYVINYL ALCOHOL

YE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (SEE YOUR SAFETY EQUIPMENT SUPPLIER).

THER PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

********** SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS **********

ONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED.

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********** SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS (CONTINUED) **********

THE NATIONAL CANCER INSTITUTE HAS CONCLUDED FROM THE RESULTS OF A BIOASSAY THAT PERCHLOROETHYLENE IS A LIVER CARCINOGEN WHEN GIVEN ORALLY TO LABORATORY TEST MICE.

OVEREXPOSURE TO MATERIAL HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS:, LIVER ABNORMALITIES

OVEREXPOSURE TO MATERIAL HAS BEEN SUGGESTED AS A CAUSE OF THE FOLLOWING EFFECTS IN HUMANS:, LIVER ABNORMALITIES, KIDNEY DAMAGE, LUNG DAMAGE, BRAIN DAMAGE, SPLEEN DAMAGE

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH ASHLAND OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

DEFINITIONS

SECTION I
PRODUCT IDENTIFICATION

Product Class: General or generic identification

Hazard Classification: Product meets DOT criteria for hazards listed.

SECTION II
HAZARDOUS COMPONENTS

A hazardous ingredient is one which meets one or more of the following criteria:

1. It is listed in the annual Registry of Toxic Effects of Chemical Substances, or is known to be toxic within the parameters of that Registry,

and/or

2. It has an OSHA established, 8-hour time-weighted average or acceptable ceiling concentration (c), or an American Conference of Governmental Industrial Hygienists' (ACGIH) Threshold Limit Value, and by nature of the product or its known use, is likely to become airborne,

and/or

3. It contributes to one or more of the following hazards of the product:
   a. Flashpoint below 200° F (cc), or subject to spontaneous heating or decomposition.
   b. Causes skin burns. (DOT)
   c. Strong oxidizing agent. (DOT)
   d. Subject to hazardous polymerization.

   Each ingredient meeting one or more of the above criteria is listed in Section II if present at a level greater than one percent. Ingredients which are claimed to be carcinogens, teratogens, mutagens, or causative agents of other reproductive disorders are listed if known or believed to be present, provided that the data supporting such claims is considered valid.

Each hazardous ingredient is listed be chemical, generic, or proprietary name, its level in the product is expressed as 1% or less, 1-10%, 10-30%, 30-60%, or greater than 60%, or by other means.

SECTION III
PHYSICAL DATA

Initial Boiling Point: If liquid at 68° F.

Vapor Pressure: If liquid at 68°F or which sublimes.

Vapor Density: For volatile portion of product.

Specific Gravity: If specific gravity of product is not known, indicated as < 1 , $= 1$, > 1.

Percent Volatiles: Percentage of material with initial boiling point below 425°F.

Evaporation Rate: Indicated as faster or slower than ethyl ether, unless otherwise stated.

SECTION IV
FIRE AND EXPLOSION HAZARDS

Flash Point: Closed Cup

Lower Explosion Limit: Indicated for component with lowest value

Hazardous Decomposition Products: Known hazardous products resulting from heating, burning, etc., or reacted raw materials which may arise through heating, burning, etc.

Special Firefighting Procedures: Indicates equipment to protect fireman from toxic products of combustion or if water is not to be used.

Unusual Fire & Explosion Hazards: Hazards not covered by other sections of this report are shown here.

SECTION V
HEALTH HAZARD DATA

Threshold Limit Value: OSHA established value-If none available, adopted value.

Effects of Overexposure: Given in general terms; local and systemic effects to the eyes, skin, if material is ingested, if material is inhaled, unless not applicable due to physical form of product.

Emergency First Aid Procedures: Emergency procedures for eye contact, ingestion, or inhalation, unless not applicable due to the physical form of product.

SECTION VI
REACTIVITY DATA

Hazardous Polymerization: Conditions to avoid hazardous polymerization resulting in a large release of energy.

Stability: Conditions to avoid if unstable under normal circumstances.

Incompatibility: Materials to avoid.

SECTION VI
SPILL OR LEAK PROCEDURES

Reasonable precautions to be taken and the methods of clean-up to be used in the event of spillage of the product. Consult state and local regulations for accepted procedures.

SECTION VIII
PROTECTIVE EQUIPMENT TO BE USED

This section indicates protective equipment to be used when handling the product.

SECTION IX
SPECIAL PRECAUTIONS OR OTHER COMMENTS

This section is to cover any relevant points not previously mentioned.